

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): An inflator for inflating a cushion of an airbag module for protecting an occupant of a vehicle from impact, the inflator comprising:

a quantity of compressed gas;

an anode; and

a cathode;

wherein one of the anode and the cathode extends through at least a portion of the other of the anode and the cathode such that the anode and the cathode cooperate to produce a voltage across at least a portion of the compressed gas to induce expansion of the compressed gas in response to application of an activation signal to the anode and cathode.

Claim 2 (original): The inflator of claim 1, wherein the anode and the cathode are disposed to produce the voltage to release the compressed gas from containment within a housing of the inflator.

Claim 3 (original): The inflator of claim 2, wherein the anode and cathode are disposed to continue producing the voltage after release of the compressed gas from containment.

Claim 4 (original): The inflator of claim 1, wherein the anode and the cathode are coupled to a voltage source that varies the voltage according to severity of a collision in which the vehicle is involved.

Claim 5 (original): The inflator of claim 1, wherein the compressed gas comprises a gas selected to dissociate when acted upon by the voltage, the dissociation inducing expansion of the compressed gas.

Claim 6 (original): The inflator of claim 5, wherein the compressed gas comprises nitrous oxide.

Claim 7 (original): The inflator of claim 1, wherein the compressed gas is of a type selected to combust when acted upon by the voltage, the compression inducing expansion of the compressed gas.

Claim 8 (original): The inflator of claim 7, wherein the compressed gas comprises a fuel/oxidizer mix with a concentration selected such that the compressed gas remains under a lean flammable limit of the compressed gas to limit combustion of the compressed gas.

Claim 9 (original): The inflator of claim 1, wherein the anode and the cathode are disposed such that the voltage produces an arc across the compressed gas, wherein one of the anode and the cathode comprises a nozzle that directs the portion of the compressed gas through the arc to form an arc-jet.

Claim 10 (original): The inflator of claim 1, wherein the anode and the cathode are disposed such that the voltage produces a corona within the compressed gas.

Claim 11 (original): An inflator for inflating a cushion of an airbag module for protecting an occupant of a vehicle from impact, the inflator comprising:

- a housing;
- a quantity of compressed gas stored within the housing;
- a nozzle in communication with the compressed gas, the nozzle having a generally tapered interior; and
- at least one conductor disposed to produce an electrical arc proximate the nozzle such that at least a portion of the compressed gas passes through the nozzle and is heated by the electrical arc to form an arc-jet in response to receipt of an electric activation signal by the conductor.

Claim 12 (original): The inflator of claim 11, wherein the conductor comprises one of an anode and a cathode and the nozzle comprises the other of the anode and the cathode, wherein the conductor comprises a rod disposed proximate the nozzle such that a voltage between the rod and the nozzle produces the electrical arc between the nozzle and the rod.

Claim 13 (original): The inflator of claim 11, wherein the nozzle is integrated with an interior wall disposed to define an interior chamber within the housing, the interior wall cooperating with the housing to define an exterior chamber.

Claim 14 (original): The inflator of claim 13, further comprising a burst disc disposed to seal the interior chamber from the exterior chamber until the inflator deploys.

Claim 15 (original): The inflator of claim 14, wherein the compressed gas comprises a first gas and a second gas different from the first gas, wherein the first gas is disposed within the interior chamber and the second gases is disposed within the exterior chamber.

Claim 16 (original): The inflator of claim 13, wherein the housing comprises an outlet end in which at least one outlet orifice is formed, wherein the nozzle is formed proximate the outlet end such that a majority of the compressed gas flows past the nozzle to reach the outlet orifice.

Claim 17 (original): The inflator of claim 13, further comprising a supplemental wall attached to the housing to define a supplemental chamber between the housing and the supplemental wall, wherein the supplemental chamber is in communication with the interior chamber.

Claim 18 (original): The inflator of claim 13, wherein the exterior chamber comprises an exterior chamber divider disposed to separate the exterior chamber into an outlet portion and a

distal portion, wherein the interior chamber is disposed generally between the outlet portion and the distal portion.

Claims 19-22 (cancelled)

Claim 23 (original): An airbag module for protecting an occupant of a vehicle from impact, the airbag module comprising:

a cushion having a stowed configuration and a deployed configuration in which the cushion is inflated to receive impact of the occupant; and

an inflator comprising an anode and a cathode, wherein one of the anode and the cathode extends through at least a portion of the other of the anode and the cathode such that the anode and the cathode cooperate to produce a voltage across at least a portion of a gas to induce expansion of the gas in response to application of an activation signal to the anode and cathode.

Claim 24 (original): The airbag module of claim 23, wherein the anode and the cathode are disposed to produce the voltage to release the gas from containment within a housing of the inflator.

Claim 25 (original): The airbag module of claim 24, wherein the anode and cathode are disposed to continue producing the voltage after release of the gas from containment.

Claim 26 (original): The airbag module of claim 23, wherein the anode and the cathode are coupled to a voltage source that varies the voltage according to severity of a collision in which the vehicle is involved.

Claim 27 (original): The airbag module of claim 23, wherein the gas comprises a gas selected to dissociate when acted upon by the voltage, the dissociation creating additional gas and inducing expansion of the gas.

Claim 28 (original): The airbag module of claim 23, wherein the gas is of a type selected to combust when acted upon by the voltage, the combustion inducing expansion of the gas.

Claim 29 (original): The airbag module of claim 23, wherein the anode and the cathode are disposed such that the voltage produces an arc across the gas, wherein one of the anode and the cathode comprises a nozzle that directs the portion of the gas through the arc to form an arc-jet.

Claim 30 (original): The airbag module of claim 23, wherein the anode and the cathode are disposed such that the voltage produces a corona within the gas.

Claims 31-62 (cancelled)